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HOW CAN OUR WORK IN FOODS BE MADE MORE VITAL TO THE HEALTH OF THE CHILD?[1]

LUCY H. GILLETT

Director, Dietetic Bureau, League for Preventive Work, Boston

Seven years ago as a member of the teaching profession I was feeling the need of closer application of subject matter, as taught in cookery classes, to the needs of the girls in their homes. This feeling had grown gradually during several years of teaching, first of children from 7 to 16 years of age, then of students who in turn were preparing to teach.

At first I had been gratified and perhaps satisfied, if Mary said she had made biscuits for supper, if Jane had made soup, or if Harriet had made gingerbread, but these isolated dishes did not cure nor prevent pale faces, they did not develop strength in the girls that were weak, they did not help those who were slow in their grade work to concentrate better in the class room. One glimpse after another into the home life of the girls only served to strengthen the impression that they were get ting much they could not apply and that this was crowding out much they needed to apply. What was it that they needed?

This constant question stimulated a desire to embrace the first opportunity for getting more definite knowledge of the actual needs of the children. During the last six years I have had this opportunity, an opportunity to study conditions in families where there are children of school age, where there are tubercular or malnourished children, and in almost

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every one of these families there is a food problem. While the food is not always the only problem, it is usually a very important factor. This study has made me feel more strongly than ever the gulf that lies between the person sitting in an office deciding what 300 children should need in ideal homes and what 300 children actually do need to help them in the homes in which they are now living. This paper is written, therefore, not in a spirit of criticism of anything that is now being done, but rather to give to those who feel the need for, but are not able to get first hand, suggestions which will help them to adapt their work to present day needs.

It is surprising to find underweight and malnourished children in all types of families, in the families of those who have plenty of money as well as in families of limited means. One cannot judge by the appearance of the face. The physician frequently finds that a plump rosy face is supported by a malnourished body. Figures from various cities show 20 per cent of the children underweight, and underweight is not the only index to malnutrition. In many instances the children are in good condition until they reach the age of 12 or 14, when they begin to get thin and pale, and are more susceptible to disease than they should be. This seems reasonable to expect unless the amount of food eaten by these children increases to correspond to the rapidity of growth.

In families where we have been asked to make suggestions concerning the food, mothers frequently tell us that children are getting on much better at school after the food has been adjusted. Does the work as taught in the cookery class help the children to concentrate and to study better? Does the class room teacher note a mental improvement in any of the children who are taking cookery?

Every teacher of foods is doubtless emphasizing the relation of food to health but is it in the concrete or in the abstract? Do girls know that the enthusiasm and freshness of youth which every girl wants may be maintained or destroyed by her daily habits of eating? Rosy cheeks and good teeth are in a large measure dependent upon the food eaten.

One of our Simmons students, a young woman with every appearance of being in good health, was doing some field work through the Bureau. She was trying to convince the mother of several thin and sickly looking children that they should not be allowed to drink coffee. Finally the mother said "Do you drink coffee?" and the worker replied, "No, I never touch it." The next day the mother told another worker who was in the same family that she was not going to give her children coffee

any more because she wanted them to have red cheeks like Miss B——. In the first place then, are we living examples of what we want our pupils to be?

Does each girl know whether she weighs more or less than she should so that she may regulate her diet accordingly, or whether her brothers and sisters are of average weight? If not, is there some physical defect that should be remedied so that the food may do its work? I do not wish to suggest that the cookery teacher is responsible for the physical condition of the children, for she has neither time nor training; neither is it her responsibility. This distinctly is the problem of the nurse, the physical director, or the doctor, but the relation of food to health and its selection with health in mind *is our* problem and we do not want to waste time trying to build up, with food, conditions that are due to other causes. The work in foods provides an excellent opportunity to work in coöperation with the nurse, the doctor, or the physical director.

In social work we are meeting in individual homes the problems in nutrition that teachers are meeting in group work. In one of our nutrition classes where we were trying to bring 12 or 15 underweight and malnourished girls into good condition by teaching and persuading them to follow proper food and other health habits, the girls said, "We have had this in school but it never occurred to us that it had anything to do with our being underweight."

My second thought is to ask whether it is not possible to make the work more personal?

In teaching a cosmopolitan group such as we get in our public schools we must decide which things are fundamental and at the same time most useful. We want such information as may be taken home, not only the kind that is taken home in a cup, but the kind that will help to lay a good foundation for the health and strength of the whole family, the kind that may be used in the future as well as the present, the kind that applies to all nationalities.

Has any teacher ever said that there is not time to teach everything? There is a big question in my mind as to whether there is time in the grades to teach girls that foods are composed of proteins, fats, carbohydrates, mineral elements, vitamines, and water. These are surely fundamental facts, but are they the facts that can be used to best advantage?

I know from experience that children delight in learning these names, that they can tell in a superficial way the value of each in the body; but if you were to go into the homes of any one of these women today, to see what application she really makes of this information when a real test arises, I wonder whether you would not be forced to agree with me that in the face of so many needs the time might be spent to better advantage? That the information gained does not justify the time and energy spent upon it? I would like to raise the question whether the technical composition of foods could not be left to the high schools where enough time may be put upon it to give a working knowledge and where the children are old enough to apply the knowledge intelligently? Some may say that so few go to high school they want them to get it in the grades, but if we cannot give them everything in the grades, and if this crowds out things that are more important, are we not forced to eliminate something and put the emphasis on the question of value? We cannot teach chemistry or advanced mathematics in the grades. Why food composition?

Perhaps a teacher feels that she is simplifying the teaching of food values and evading the difficulty by classifying foods into muscle builders, energy foods, body regulators. In this it seems to me we are easing our conscience and fooling ourselves without educating the children. In the first place, are we really giving the correct impression by referring to a certain class of foods, presumably high protein foods, as muscle builders? Is the protein of any value in the growth of the muscles if the mineral elements and the vitamines are not also present? Are they not just as important in the growth of the muscles as the protein? Children soon assign values of their own, too, in spite of our cautions. They reason like this: If protein builds good strong muscles, then is not that the thing to be desired? And if the time comes when they have to economize, will they not think the protein the thing above all else to include because of muscles and strength? In 100 dietary studies in which accurate records were kept and the food values of the diet were calculated, in no instance was the protein deficient if the energy was adequate, but the things that were deficient, the thing that was holding boys and girls back in their development, the thing that was causing pale faces and weary bodies, was the lack of the mineral elements and the foods containing vitamines. We find malnutrition more frequently in children whose diets are rich in protein and low in vegetables than where protein foods are deficient and vegetables abundant. Why overemphasize protein foods by referring to them incorrectly as exclusively muscle builders?

What are the important things of common interest? Are they not the teaching of the relation of food to health, the planning of meals for a family to include the desired foods necessary for health of each member, a consideration of economy and marketing, and the preparation of the foods that illustrate these points?

We all need milk, vegetables, fruit, grain products, and fats, normally. (Abnormal cases are problems for a physician.) Meat, fish, sugar are optional. Why not think in terms of types of foods, and teach the planning of meals to provide these foods, the different foods to use at different seasons of the year, the amounts of each type of food needed by each member of the family for a day and then for a week to make up the weekly grocery order, the purchasing of these foods, the relative economy of each food as compared with other foods in that type?

This will help to solve the difficulty that often arises because of nationality. People of all nationalities, of all ages, and of all occupations need these same types of foods and from each type may be selected foods preferred by each. Take vegetables, for example. When the question of nationality arises one could find from the surrounding markets and shops or from the members of the class the names of the vegetables used by the nationalities involved and these might be brought up in class. Vegetables of a similar nature might be classed together and rules for the cooking of each class given. This would help all nationalities and so called Americanization would be spread thereby. Each nationality could learn from the other and neither would feel that it was having something forced upon him. By showing respect for and acknowledging the good that is in all diets there is sure to be an interchange of food habits which will be one of the ways of amalgamating the people living in one country.

Remembering that it is usually easier in the fall to begin with foods in season we will suppose, for example, that vegetables are to be discussed in September. Do these lessons with vegetables leave with the girl a firm conviction that the vegetables are necessary for health even to the point of making her learn to like them? Is every girl in the class so convinced of the value of vegetables that she is going to have at least two vegetables in her diet every day? Does she know at what age children should begin to eat vegetables and that it is very important that they be persuaded to learn to like them early in life (for they will be exceptional children if they do like them at first)? Does she know how to prepare vegetables for children under five? Does she know which

ones they should not eat? Does she know which vegetables to buy to get the most food value for her money if she has to economize? Does she know that vegetables are very valuable in overcoming constipation and that it may be corrected or prevented by proper food? Does she realize its seriousness if allowed to continue? Does she know that green and leafy vegetables have different qualities from the root vegetables and that she should have some green and leafy vegetable at least two or three times a week and as much oftener as possible? Does she know which the green and leafy vegetables are? When leafy vegetables are scarce in January, February, and March, will she know what to do to safeguard her health, provided the cost of the green vegetables prohibits their use?

I have been trying to imagine myself back in the school room to see whether it would be possible to emphasize and to prepare the leafy vegetables that are most abundant in the fall, then later in the winter to emphasize cabbage and those leafy vegetables to be found all winter; and in the spring, beet greens and dandelions or other spring greens. Dried vegetables do not answer the same purpose; fruit is scarce and expensive at the same season as vegetables, and why should the pupils not know that canned vegetables are better than none at all. They should at least be taught to use more milk when green vegetables are unobtainable. It may be easy to teach vegetables in the fall but the real test for the girl comes when they are scarce and this is when she needs most help. Children are not going to remember from September to February what to do. They must learn by doing.

If every teacher realized how many children are really suffering from malnutrition because of the lack of vegetables, none could rest until she had planned to help her girls to get vegetables in their diets, not six months a year, but twelve months.

The importance of milk is usually strongly emphasized. Children know that it is essential for growth. They usually know of what milk is composed but how many girls increase the amount they have been drinking because of this knowledge? Which is more important, provided there is not time for both, to know the food composition of milk, or to learn to use at least 2 cups or more a day? Are we content and elated when he hear that one or two children or perhaps 75 per cent of the children are drinking more milk? The milk that 19 children drink will not help the twentieth who perhaps needs it most.

Do they know that milk is a food whether taken as a beverage or in cooked form? That when we say a quart a day, some of this will probably be taken in food prepared for the family. We frequently hear intelligent, well-informed people express surprise in learning that the food value of milk for adults is the same whether cooked or uncooked. But do they know how to get even a full quart into the diet in cooked form if necessary? Do they know how much milk a child one year old should have? 5 years old? 10 years old? And it is especially important to know how much milk is required by the whole family. (Perhaps the teacher in the arithmetic class might be persuaded to introduce a problem or two at this time.) Do they know that milk helps to strengthen the teeth and to steady the nerves? And, that no other food can supply the same qualities in such large amounts?

Since we find tea and coffee used when milk should be given, could not the subject of tea and coffee be introduced at this point to good advantage? This raises the question at once as to whether tea or coffee should be made in class. If we are emphasizing the health side of food why denounce the coffee and then proceed to teach children to make it? I imagine that children are almost universally told of its ill-effects. Some have said "it would be made anyway; then why not have it well made?" If this excuse still exists could not the preparation be left until the end of the year when a tray for the invalid may be prepared? We consider the tea and coffee habit one of the worst food sins of children. We find the tea and coffee habit so well established that children often go to school with only tea or coffee and bread for breakfast. The teacher of cookery in the grades can do much in overcoming this tea and coffee habit. A class of 25 underweight boys were running a race to see who would get into good physical condition first through observing good habits. A father of one of the boys who was 18 pounds underweight came to visit the class one day. He said, "My boy used to drink coffee three times a day but he came home from the class one day and he say teacher say coffee keep him from growing. He say, 'Mother, I don't want no more coffee,' and because Antonio stop, his brothers and sisters stop," and the man continued: "Why don't more of the teachers tell the boys what to do? They do it when you say so but they no mind us."

Doubtless every teacher does say much. How many say it with such force and personal application that children give up tea and coffee? These things have to be repeated many times, and said in a tone that

carries conviction, for learning good food habits is like learning a multiplication table. It frequently takes us from 6 to 8 or even more visits to persuade children to give up coffee entirely.

In a similar way the subjects of fruits, grain products, fats, sugars, eggs, meat, fish, and other foods might be discussed. There is the value of grain products for "vigor and vim" as Cho Cho says, the relative importance of the cereals with and without the outside coating removed, the various ways in which the cereals may be introduced into the diet other than as a breakfast cereal as in soups, breads, and puddings. Many children will eat the cereal for supper but prefer bread and milk for breakfast. The need of considerable fat in the diet should be emphasized in the light of more recent experiments, but the evil of fried foods cannot be too strongly urged. The harmfulness of sugar taken in concentrated form except at the end of a meal, with appropriate ways of introducing it in dilute form, and the undesirability of meat more than once a day, especially for children, and then only in small amounts, are only suggestive of the many things the children need to practice daily if they are to be healthy.

After each girl realizes the importance of the various types of food in the diet she has a problem at home which we are apt to overlook. This is the planning of the family meals and introducing into those meals the food she and the rest of the children need.

The average income does not warrant many extras and father says he wants something more substantial than creamed soups, cereals, puddings, and other things that are good for children. One dish must frequently provide the requirements for the mother, father, and all the children ranging in age from 1 to 16 years. The new dishes must be built into those the family already has. And the girl has to meet this problem. Do the children leave the class thinking that dessert is an essential part of a meal or do they know that it is possible to plan a one-dish meal? Many of them cannot afford two courses and it will not harm those who can afford three or four, or even more, to know how to plan one-dish meals. Anyone who has tried to stretch a $20 or even a $30 income to cover the cost of food, rent, light, fuel, clothes, and other expenses for a family of five is doubtless aware that in such families the dessert is a Sunday affair.

Many, many children, many more than we realize, are going to school without breakfast or with only a very meagre one. This may be because the mother is indisposed, it may be due to lack of child discipline, but a

proper breakfast cannot be too strongly emphasized. A proper breakfast need not be expensive. It may consist of bread and milk. If the grade teacher knew that her work would be easier if children had eaten a good breakfast it might be that she would add her word to that of the special teacher, thus reaching boys as well as girls. We find that when the same idea is urged by two or, better still, by three people interested in the same family, but from different points of view the results are much more satisfactory.

Then there is the luncheon purchased away from home either at noontime or recess. Oh! those pickles, ice cream cones, sodas, and doughnuts! How few girls realize what they are doing for themselves when they choose this kind of a luncheon!

What kind of suppers do the children have? Are they simple but nourishing? Do they have meat at night and if so are they restless in sleep? We often find children who are restless at night but sleep calmly and peacefully when the meat is taken out of their evening meal. They have better control of their nerves the next day, do better work at school, are less irritable.

Not only is it necessary to give suggestions concerning the meals, but it is especially necessary to urge regularity of meals with no eating between meals, eating slowly, and only light exercise after meals.

One word with regard to insisting on maximum standards before the whole class. One day a thin faced little boy asked how much he should weigh. When told, he looked down at the toe of a shoe that was far from new and said sadly, "Then I'm 20 pounds underweight?" He was asked if he drank milk and he said, "No, mother used to get a quart, but the baby had to have all of that." "Don't you suppose you could have just two glasses a day?" he was asked. And he said with tears in his eyes, "The baby died last week and perhaps I could have some now." The friend to whom this boy was talking did not say, "You tell your mother you must have a quart a day" because she surmised the problem in that home. We all, I am sure, would hesitate to urge the maximum when we know the conditions are unfavorable. It is far more considerate to urge the minimum in all cases and advise more if possible.

After the planning of the meals, the grocery order ordinarily follows in natural sequence. If meals are properly planned, however, would not the grocery order partially precede the meal planning? Many women buy from day to day. Too many buy from meal to meal. This is poor economy and leads to improperly planned meals. In planning

meals should not the amount of milk, vegetables, grain products, fruit, and fats that are required by the family, in other words a partial grocery order, be the basis—then the combining of these foods into meals with the addition of such amounts of meat, eggs, and fish as the family may need or may desire or can afford? Would it not be better to plan market orders a week in advance? In one family where we were asked to help, the man said he earned enough money to live comfortably but they never seemed to have enough to last through the week. They lived well for three or four days, then had bread and tea. The children were thin, always sick, out of school, and low in their class. The field worker planned with the woman the amount of milk per day, the amount of bread per day, the amount of other grain products, vegetables, fruit, fat, sugar, and meat, needed for the week. As many of these things as possible were purchased in advance. At the end of the first week of our work with this family, the woman said they had lived as well the last day as the first and all because she had planned ahead. In a short time the children were strong and sturdy and the mother said they were getting on so much better at school. She says now she does not know how she ever lived before. This is only one of many instances where planning ahead has not only saved the health of the children by stretching the purchasing power of the dollar, but it has frequently saved a family from debt.

When it comes to the question of economy, it makes some difference in the amount of growing material received in return for 10 cents whether that 10 cents is spent for oatmeal or for cornflakes. When shown a chart representing the relative value of these foods in terms of dollars and cents, many a mother has been convinced of relative economy when hours of talking have failed. These charts are just as convincing with children. We frequently hear girls say, "Oh yes, we learned how to do that at school, but we cannot afford to make it." Of course, an egg or milk adds nourishment, or perhaps muffins are made when eggs are cheap, but Mary would like to have them when eggs are 10 cents apiece, and she does not know how to use this muffin recipe without eggs. Three eggs a week for the baby is all that many families can afford when eggs are $1.20 a dozen. If the recipes are to be tried in homes where they are most needed, then we must suggest how they may be adapted to suit varying incomes, using cheaper fats where possible and even water for milk. I wonder how many realize what a minimum grocery order looks like?

Are our directions such as will necessitate the fewest possible utensils and those the least expensive? Some of our cities have school kitchens beautifully equipped. It is a joy to the girls to work in them, but, even though the equipment is complete and a good example of what a well furnished kitchen should be, would it not be possible to play a game occasionally to see with how few utensils we can get along? To see which ones are dispensable, to devise substitutes for double boilers, for egg beaters, for rolling pins? It would be interesting to many, no doubt, to know what can be done when teaching a woman in her own kitchen where the entire outfit consists of two saucepans, perhaps only one, a knife, a spoon, and a tea cup. Will the girls who come from homes like this know how to apply what they learn, unless they are taught how to do things with as few utensils as possible?

There is need for urging cleanliness and sanitation; especially necessary is it to urge separate plates, cups, spoons, knives, and forks. There is need also for emphasizing cleanliness in the care of food, such as putting food under cover away from dust and flies, for emphasizing danger in handling bread and similar foods.

The material that might be given is almost endless. No teacher feels there is time to give it all. Perhaps the things suggested here are given in the majority of our schools today, perhaps they seem impracticable, perhaps this seems like a large program, but if you have visions of some lessons that seem essential being crowded out, go down into the crowded district of the city and with a real desire to help the people, study the faces of the children and then decide what seems most important. The need of economy, like malnutrition, is not confined to the crowded districts. Visit the homes of some of the children in a well to do district and talk with the mothers until you get their confidence; see their problems and learn, not alone of their struggles, but of the way in which they adapt themselves to circumstances.

Girls are going to learn to do the things that appeal to them, so that if there is not time to teach all the cooking processes in class we may be sure they will find out later, but they may get the message of health when it is too late. When they have homes and children of their own and are asked whether they learned at school things that were most important, what should the answer be?

RACIAL AND OTHER DIFFERENCES IN DIETARY CUSTOMS[1]

VELMA PHILLIPS AND LAURA HOWELL

FOREWORD

Within the last few years has come an increasing realization of the need for more detailed information concerning actual dietary customs, especially among families of various racial groups. The nutrition worker who possesses such information can save much time, and many home economics teachers would find it valuable in making their courses really function in improving homemaking standards. The educational value of the school lunch is being stressed constantly and here also a knowledge of frequent dietary defects should go far in guiding the selection of points of emphasis especially needed in the various sections of the city where foreign colonies exist.

Dietary habits are remarkably fixed habits. Hence the data presented in this report, although collected several years ago in a limited number of sections in New York, provides a picture of dietary adequacy probably very similar to what would be found in a study conducted today in many other places than New York. The figures of cost are no longer accurate because of the increased food prices since 1918, but otherwise the study seems as valuable now as when first prepared and represents a real contribution to our limited stock of information about dietary customs.

Dr. Allinson was a woman with a remarkable gift for conducting investigations with thoroughness and skill and with a constructive vision which made the findings of widespread and permanent value. This is well illustrated by this report and the various reports from the Woman's Educational and Industrial Union, which were prepared under her direction, and by her work with the Woman's Division of the U. S. Department of Labor which was so sadly interrupted by her death in December, 1918.

Because of Dr. Allinson's close supervision of this investigation this report would seem especially valuable as an illustration of desirable methods to be followed in conducting social research in connection with home economics and presenting effectively the results of the investigation. For this reason, as well as because of the subject matter which it contains, I feel that the report should prove of great value and influence and am glad that it is to be available for use by publication.

EMMA A. WINSLOW.

[1] Prepared under the direction of May Allinson, 1917–18. Preface by Miss Allinson, Foreword by Emma Winslow.

PREFACE

How to get enough to eat in these times of high prices is a serious question for us all. But it was and still is especially serious for the foreign family with the very small income. Not only have prices jumped up beyond reach of many of these families, but their customary foods were suddenly cut off by the war. Roman cheese and olive oil have been considered a necessity in the poorest of Italian families. When Roman cheese rose to $1.25 a pound and olive oil to $4.00 a gallon, it was still considered an essential and the investigator found in the poorest homes Italians suffering from cold and lack of food, buying 1 and 2 ounces of Roman cheese and small quantities of olive oil.

Almost two-thirds of these 105 families whose diet was studied for one week were receiving less than the standard fuel requirement. Cereals, the cheapest fuel foods, may be within their reach but they have not learned how to prepare them nor how to eat them. When wheat, fats, and other foods to which they are accustomed are beyond their reach, there is serious danger of increasing the malnutrition characteristic of low income families.

Classes and demonstrations were conducted all over the city in 1917–1918 to teach the use and value of these new foods. But the foreign housewife is difficult to reach in public gatherings. Her place is still in the home and she must be reached there, to a large extent, by visiting housekeepers, dietitians, nurses, settlement workers, or others who have access to the home.

This investigation was undertaken by a group of eight students enrolled in the course listed as Practical Arts 301–2 in Teachers College, Columbia University, in the fall of 1917 under the direction of the writer. The field work began in October, 1917 and closed in February, 1918. Two months, March and April, were spent in tabulating and digesting the material gathered. The report was written by two of the students, Velma Phillips and Laura Howell.

The investigation was carried on in constant consultation and in coöperation with the Office of Home Economics of the United States Department of Agriculture which provided the schedules used. The completed schedules were turned into the Office of Home Economics for use in its dietary survey work.

New York is facing another winter when reconstruction conditions, many feel, will be even more difficult than the war conditions, and it seems worth while to bring to the attention of its people how the unusual conditions affect many of its inhabitants. These 105 families typify many families in their neighborhoods and show the need for constructive and practical education in the choice and use of foods from the standpoint of food value, cost, and satisfaction of the appetite.

With this motive in mind this study of the food used by 105 low income families, most of whom were foreign, is presented.

MAY ALLINSON.

October, 1918.

INTRODUCTION

How the family with the low income and especially the foreign family in the congested sections of New York City adjusted themselves to meet unusual conditions brought about by the war and reconstruction is the question suggesting this study. Three distinct groups or nationalities, Italian, Hebrew, and Negro, constitute the main basis for discussion. Of the 105 families from which complete weekly records were secured, 44 were Italian averaging 7 in a family, 22 Hebrew averaging 6 in a family, and 27 Negro averaging 4 in a family. Twelve more constituted a miscellaneous group of which seven were Irish, one Russian Pole, one Scotch, one German-American, and two German-Italian.

These 105 families comprised 562 individuals or 5.3 persons per family. Three-fifths (61 per cent) of the 562 persons were under eighteen years of age and almost one-half (47 per cent) were under fourteen years of age.

The investigators got in touch with these groups through families who were known to the Association for Improving the Condition of the Poor, and the settlements of the city. The majority of the families studied had no connection with these philanthropic organizations.

METHOD OF STUDY

An accurate record of the food consumed by each family for one week, the food value, the cost, and waste was the goal of the investigators. Scales, weighing accurately to the ounce, were taken to each family whose weekly diet was studied. An inventory of the food on hand was made by the investigator at the beginning and the end of the week. This was much less arduous than might be supposed. The investigator frequently found absolutely no food in the house at the beginning or at the end of the study. The mother explained that they had to buy for each meal, otherwise the children would eat it all up and there would be no food or money to buy more for meal times. Each day the food bought by the family was recorded. Specially prepared sheets were provided on which the weight, price, and waste were noted.

The waste, too, occupied a very small place in most of these records. Crumbs, peelings, and scraps were frequently utilized in many of these families. Some women were indignant at the suggestion that there should be any waste to weigh.

The investigator visited the family through the week as often as seemed necessary, in some cases every day. In other families, where some

member seemed intelligent and reliable, only two or three visits a week were made. In the foreign families, especially in the Italian families, the children took much of the responsibility for the weighing and recording and were found to be very faithful.

NEIGHBORHOODS

The neighborhoods varied with the nationality. The Italians and Hebrews visited lived for the most part on the congested lower east side, centering about Spring and Grand Streets, respectively. Their apartments were of the poorest type averaging from two to five rooms for large families of from seven to nine individuals. The Negroes who were visited lived on the upper side centering about 130th Street, where the housing conditions were comparatively good. Though the average Negro family was small, it occupied from two to eight rooms. Lodgers were much more common among the Negroes than among either the Italians or Hebrews.

LIVING CONDITIONS

Weekly incomes. The weekly incomes of these families showed a wide range. The Negroes ranked first in the income scale with the highest minimum of $8.14 and the highest maximum of $50.00 with the highest average of $26.49 for the week. The Hebrews had the lowest incomes with the maximum weekly income of $22.00 and an average of $16.05.

Occupations. Each nationality group had its characteristic occupation. The majority of the Italian men were out of door day laborers doing the heavy work on the docks, near which they lived, and work on the streets and construction; though tailors, barbers, and others were represented. The men in the Hebrew families were garment workers for the most part and the Negroes were waiters and cooks. The miscellaneous group of 12 families of different nationalities were engaged in an equally miscellaneous group of unskilled occupations.

In many homes the women supplemented the family income. The Italian women did sweat shop work at home such as finishing clothing and making paper flowers. The Negro women frequently worked outside the home in domestic service. The Jewish mothers seldom worked outside the home if there were other wage earners. The women in the miscellaneous group were often employed as janitresses. The larger

incomes observed in some of the groups were often due to the earnings of the older children.

Rents. The rents varied with the section of the city. The proportion of income spent for rent varied slightly as is shown in table 1.

Considering the 105 families as a group, 17.5 per cent of the income was spent for rent. The rent paid by the average Hebrew family corresponds with the average of the whole group (17.4 per cent). The average Negro family spent a larger proportion (20 per cent) of its income for rent and the average Italian family, a smaller proportion (16.4 per cent).

Although the average of the table seems typical of the amount estimated as a fair allowance for the rent in the country in general, the extremes are striking. One-third of the families spent between 10 and 15 per cent of their income for rent and eight families spent less than 10 per cent. The Italian families whose incomes were increased above the average of their race because of the earnings of the children still remain in the crowded districts where rents are low. The Negroes, on the other hand, spend a somewhat higher percentage for rent than either the Italians or the Hebrews. This may be because they take their standards from their employers or, as is true in many places, because they are exploited.

Shopping. The majority of the families studied bought the food for one meal or at most for one day at a time and usually at the nearest store. Only those of the higher income groups shopped outside their own immediate neighborhood. The Hebrews and Italians bought in smaller quantities than the Negroes or the miscellaneous group. Two ounces of butter, one ounce of coffee, or four ounces of sugar were customary purchases. In the majority of these homes little if any food was ever kept on hand. The Negroes on the other hand often had an imposing array of food in the house and habitually secured larger quantities than the foreign families.

This study was made during the first year the United States entered the war and the food regulations were just going into effect. The field work began in October, 1917 and continued until February, 1918. During this time the first sugar shortage was at its height and the price at times and in some sections was exorbitant. This may account in some degree for the low percentage of sugar used and the comparatively high price paid. During December, January, and February the usual coal shortage and extreme cold made the need of high caloric value of food more imperative than under ordinary conditions.

Dietaries. In order to give some idea of the kind and selection of food used by the average family scheduled the following examples are given as typical for each race.

Jewish menus

Breakfast	*Breakfast*
Coffee with milk and sugar	Coffee with milk and sugar
Rolls Sweet butter	Soft cooked egg
	Rolls
Lunch	*Lunch*
Rye bread	Rye bread
Smoked salmon	Kippered herring
Supper	*Supper*
Soup with vegetables and meat	Lima beans and barley
Potatoes	Potatoes
Rye bread	Rye bread

Italian menus

Breakfast	*Breakfast*
Coffee with milk and sugar	Coffee with milk and sugar
Bread	Bread
Lunch	*Lunch*
Soup—Vegetables with small pieces of onion and pork	Navy beans with tomato paste
Italian bread	Italian bread
Supper	*Supper*
Spaghetti with tomato paste	Codfish cooked in oil
Italian bread	Potatoes
	Italian bread

Negro menus

Breakfast	*Breakfast*
Pork chops	Sausage
Corn cakes	Hot cakes
Coffee Condensed milk	Coffee, cream and sugar
Lunch	*Lunch*
Meat broth with rice	Fried hominy
Bread and butter	Syrup Tea
Dinner	*Dinner*
Lamb chops	Fried ham
Boiled hominy	Sweet potatoes
Hot biscuit	Canned corn
Tea	Bread and butter

TABLE 1

Weekly income and percentage for rent

NATIONALITY	NUMBER OF FAMILIES	WEEKLY INCOME			SPENT FOR RENT
		Minimum	Maximum	Average	
					per cent
Italian	44	$8.00	$44.00	$19.45	16.4
Negro	27	8.14	50.00	26.49	20.0*
Hebrew	22	7.20	22.00	16.05	17.4*
Miscellaneous	12	5.30	41.00	21.90	14.6

* Two Negro families and one Hebrew family omitted because rent was paid for in janitor service.

TABLE 2

Distribution of families when arranged according to cost of food per man per day

COST PER MAN PER DAY	NUMBER OF FAMILIES WITH SPECIFIED COST PER DAY				
	Italian	Jewish	Negro	Miscellaneous	Total
Less than 15¢					
From 15¢ to 20¢	1	2	2		5
From 20¢ to 25¢	4	3	3		10
From 25¢ to 30¢	2	5	2		9
From 30¢ to 35¢	11	4	4	2	21
From 35¢ to 40¢	7	3	4	3	17
From 40¢ to 45¢	4	4	4	2	14
From 45¢ to 50¢	2	1	2	1	6
From 50¢ to 60¢	5		3	4	12
60¢ and more	8		3		11
Total	44	22	27	12	105

TABLE 3

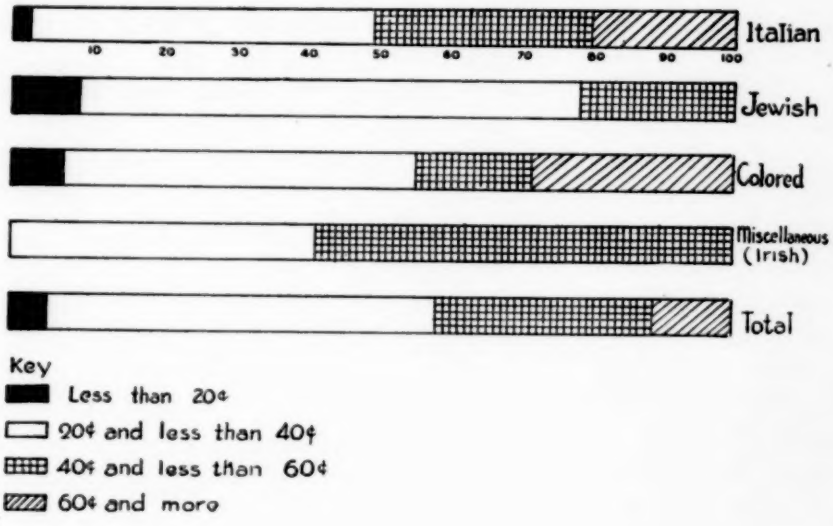
Cost per 3000 calories

COST PER 3000 CALORIES	NUMBER OF FAMILIES PAYING SPECIFIED AMOUNT PER 3000 CALORIES				
	Italian	Jewish	Negro	Miscellaneous	Total
Less than 30¢	3	2			5
From 30¢ to 35¢	12	7	3	3	25
From 35¢ to 40¢	9	8	5	1	23
From 40¢ to 45¢	9	5	6	4	24
From 45¢ to 50¢	5		8	2	15
From 50¢ to 60¢	4		4	2	10
From 60¢ to 70¢	1		1		2
70¢ amd more	1				1
Total	44	22	27	12	105

Daily cost of food. Thirty-eight of the families studied spent between $.30 and $.40 per man per day for food, with only 24 below $0.30, a sum higher than Sherman and Gillett[2] found in the families studied in 1914–1915 where the most frequent amount was from $0.25 to $0.35. One-fifth of the families in the present study spent more than $0.45, and one-fourth less than $0.30 per man per day for food. If these families had been having a diet providing 3000 calories per man per day, three-fourths instead of one-half of the families would have spent $0.30 to $0.45 per man per day for food.

Approximately 50 per cent of the Italian and Negro families spent below $0.40 per man per day for food, as shown in chart 1. Referring to Table 7 we see that 50 per cent of the Italians were receiving adequate fuel from their food while the diet of 81 per cent of the Negroes was deficient in energy. In view of the fact that the Italian people use so much macaroni and bread, this point calls our attention to the fact that grain products give the greatest fuel value for the money. In any food crisis conservation of cereals must not be urged among the working classes of

Chart I Showing percentage of families paying specified amounts per day for food



[2] Sherman and Gillett, Adequacy and Economy of Some City Dietaries.

limited means. It would seem as though conservation in this line should rest with those who can afford to pay a higher price per 1000 calories.

Proportion of income spent for food. Forty-five per cent of the income of this total group of families was spent for food. The variations for nationality are wide, ranging from 27 per cent for the Negroes to 60 per cent for the Italians. The small per cent spent by the Negroes may be accounted for by the smaller family and the larger income which was characteristic of the Negro families visited.

One hundred families were divided by nationality and listed in order of increasing amount spent for food per man per day. Each list was divided in two equal groups and the average amount spent for food and the average food value for each group was taken for consideration. It might be expected that in the "higher cost" groups the standard allowance[3] per man per day for an adequate diet, consisting of three thousand calories, 75 grams of protein, 0.67 gram of calcium, 0.015 gram of iron, 1.32 grams of phosphorus would be realized.[4] But it is interesting to note that the Italian diet provided the standard requirement on $0.38 per man per day while the diets of the other three groups ranged from $0.46 to $0.52 before providing an adequate food value.

The striking deficiency in calories in the lower group is most important, for the deficiencies in the minerals might have been overcome had the calories been high enough. While sources of fat and protein are properly considered the most expensive food, there was no deficiency in either, showing that greater emphasis needed to be placed on increasing the purchase of cereals and vegetables. Adequate nourishment due to racial food habits seemed to be lost sight of through economic pressure.

Dr. Sherman has suggested, in the interest of proper nourishment, that no more food money should be spent for meat than for milk, and as much for fruit and vegetables as for meat. In order to get adequate energy on a limited amount of money one-fourth may well go for cereals. In comparison with this suggestion the following data from a study of the diet of our 105 families is given. (Table 5.)

The distribution of money in Italian families came nearer this suggested division of relative amounts to be paid for each type of food than in any of the other nationalities. The Negro diet is conspicuous for the small food value received in return for the money spent for food.

[3] See Sherman's Chemistry of Food and Nutrition.

[4] "We are now using 1.32 as agreeing better with all the evidence now available. This means that few dietaries are regarded as deficient in phosphorus."—H. C. SHERMAN.

Miss Gillett has formulated, in connection with the standard for the division for food money and the relative weight of food for expenditures, an estimate that for each pound of meat purchased there should be 3 pounds of milk and cheese, $3\frac{1}{2}$ pounds of vegetables and fruits, 4 pounds of grain products, and $\frac{1}{2}$ pound of fats, sugar, etc.

TABLE 4

Cost and food value of one hundred dietaries; average by nationality in two groups

GROUP		NUMBER OF FAMILIES	AVERAGE COST AND FOOD VALUE PER MAN PER DAY OF EACH GROUP						
			Cost	Calories	Protein	Fat	Calcium	Iron	Phosphorus
					grams	*grams*	*grams*	*grams*	*grams*
Italian	1	20	$0.28	2516	96.8	89.4	0.70	0.013	1.31
	2	21	.46	3091	110.2	100.1	0.63	0.019	1.37
Negro	1	12	.31	2268	73.5	91.9	0.48	0.010	1.00
	2	13	.51	3340	102.3	139.3	0.74	0.017	1.69
Jewish	1	11	.22	2028	75.0	40.5	0.39	0.012	1.14
	2	11	.38	2943	114.7	76.9	0.69	0.019	1.73
Miscellaneous	1	6	.36	2808	95.6	89.1	0.74	0.012	1.46
	2	6	.52	3506	123.0	116.0	1.05	0.018	1.81
Total	1	49	$0.30	2504	90.3	84.6	0.61	0.012	1.30
	2	51	.49	3232	117.4	114.2	0.74	0.020	1.67

Note: The families were listed in order of increasing amount spent for food per man per day. The list was divided into two equal groups and the average amount spent and the average amount of food value for each group taken for consideration.

Three Italian and two Negro families were omitted because they were not representative. (Calories consumed by the Italians seemed too high for possible consumption while those of the Negro families seemed too low for typical regular habit.)

TABLE 5

Proportions spent for different foods compared with standard suggested

NATIONALITY	MEAT AND EGGS	MILK AND CHEESE	FRUIT AND VEGETABLES	GRAIN PRODUCTS	MISCELLANEOUS	TOTAL
Amounts suggested	$0.20	$0.20	$0.20	$0.25	$0.15	$1.00
Italians	.23	.14	.15	.28	.20	1.00
Negroes	.40	.13	.13	.18	.15	1.00
Hebrews	.36	.11	.12	.29	.12	1.00
Miscellaneous	.35	.15	.15	.20	.15	1.00
Total (average)	$0.31	$0.12	$0.14	$0.26	$0.17	$1.00

TABLE 6

Percentage expenditure for each type of food, average of 105 families

TYPE OF FOOD	PERCENTAGE OF COST					PERCENTAGE OF WEIGHT				
	Negro	Jew	Italian	Irish	Total	Negro	Jew	Italian	Irish	Total
Meats and fish	36.0	31.0	19.5	29.0	26.0	17.4	12.2	9.3	11.1	11.7
Eggs	4.0	5.0	3.6	5.4	5.3	1.3	1.2	1.4	2.0	1.2
Milk and cream	12.0	10.0	10.3	15.0	11.0	20.7	17.1	20.2	27.0	20.1
Cheese	0.7	0.5	3.4	0.4	1.0	0.3	0.2	0.5	0.1	0.3
Fat	7.0	7.0	9.7	6.3	8.3	2.5	1.3	2.9	1.0	2.3
Grain products	18.5	29.0	28.6	20.3	25.4	30.1	36.0	37.1	21.8	34.5
Sugar	3.0	2.7	3.0	4.1	3.0	4.3	2.0	3.6	4.0	3.0
Fruits and vegetables	13.2	12.0	14.9	14.5	14.3	21.0	28.0	23.1	29.0	24.6
Nuts	0.6	0.0	0.4	0.0	0.3	0.2	0.0	0.1	0.0	0.1
Miscellaneous	5.0	2.0	6.6	5.0	5.4	2.2	2.0	1.8	4.0	2.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

From table 6, it can be readily seen that the families did not take advantage of the high food value of nuts and cheese. The relatively high expenditures for cheese by the Italians was due to the expensive cheese purchased and not to the amount.

FOOD VALUE OF DIETS BY NATIONALITY

The tables showing the food analysis are grouped so far as possible on bases of nationality to see if racial variations in food habits in any way account for difference in food values received. The diet of the Italians is characterized by the large amount of wheat products, green vegetables, and olive oil; the diet of the Negroes is characterized by pork products and milled grains such as rice and hominy; while the Hebrews adhere more or less strictly to the dietary laws. The miscellaneous group had an Americanized diet which was characterized by its high cost rather than by any one kind of food or by its food value.

In the whole group of 105 families, 61 per cent were receiving less than 3000 calories per man per day as shown in table 7. Among the Italians and miscellaneous families, 50 per cent received sufficient calories while only 30 per cent of the Hebrews and 19 per cent of the Negroes received the standard amount. It is particularly interesting to note that while the Negroes had a much greater quantity of food and spent more for it than the foreign families, they received the least nourishment from their food.

The supply of protein was more frequently adequate. Only 17 per cent of the families received below the standard allowance of 75 grams of protein, per man per day, as shown in table 8. But in the protein supply as in fuel value a wide variation was discovered among the families of different nationalities. Thirty-seven per cent of the Negro families received less than the standard amount and only 9 per cent of the Italians. Referring to table 6, we note that the expenditure of the Negroes and Italians for sugar and fat differed little, but there is a wide difference between their expenditure for meat and cereals. The Italians used large amounts of wheat products high in protein while the Negroes used grain products low in protein. Although the Negro expenditure for meat was high, the meat used was high priced, largely pork with a large amount of fat.

TABLE 7

Distribution of families according to calories received (3000 per man per day taken as a standard)

CALORIES PER MAN PER DAY	NUMBER OF FAMILIES RECEIVING SPECIFIED NUMBER OF CALORIES				
	Italian	Negro	Jewish	Miscellaneous	Total
Less than 1500	1	2			3
From 1500 to 2000	2	3	3		8
From 2000 to 2500	10	7	7	2	26
From 2500 to 3000	9	7	8	4	28
From 3000 to 3500	8	2	3	2	15
From 3500 to 4000	6	4	1	3	14
From 4000 to 4500	2	2			4
From 4500 to 5000	3			1	4
5000 and more	3				3
Total families	44	27	22	12	105
Per cent below 3000 calories	50	81	70	50	61

In table 12, compiled from 84 of the families arranged according to nationality, is shown the per cent of the families with diets deficient. The food factor most frequently adequate was the protein, only 17 per cent of the 84 families showing a deficiency. The fats might perhaps be considered as meeting the requirements since it is possible to substitute carbohydrate for the most part and it was found that no family had less than 13 grams per man per day.

All the mineral elements showed a high percentage of deficiency, 50 per cent of the families being below standard in calcium, phosphorus

and iron. If part of the protein needed had been obtained from milk, the protein standard would still have been met and the calcium requirement more nearly provided.

Analyzing the families by nationality it was found that 24 out of 31 Italian families had less than 3000 calories per man per day and that 13 of these families were paying more than $0.35 per man per day. Of the 7 properly nourished families in this group one paid more than $0.50 per man per day and six more than $0.60.

TABLE 8

Distribution of families according to the amount of protein received (75 grams per man per day taken as a standard)

NUMBER OF GRAMS OF PROTEIN PER MAN PER DAY	NUMBER OF FAMILIES RECEIVING SPECIFIED NUMBER OF GRAMS OF PROTEIN				
	Italian	Jewish	Negro	Miscellaneous	Total
Less than 50 grams			1		1
From 50 grams to 75	4	4	9		17
From 75 grams to 100	15	7	11	4	37
From 100 grams to 125	11	7	5	5	28
From 125 grams to 150	5	4	1	2	12
150 grams and more	9			1	10
Total families	44	22	27	12	105
Per cent of families receiving below 75 grams	9	18	37	0	17

TABLE 9

Distribution of families according to the amount of calcium received (0.67 grams per man per day taken as a standard)

NUMBER OF GRAMS OF CALCIUM PER MAN PER DAY	NUMBER OF FAMILIES RECEIVING SPECIFIED AMOUNT OF CALCIUM				
	Italian	Jewish	Negro	Miscellaneous	Total
Less than 0.50 gram	7	8	12	3	30
From 0.50 gram to 0.67	13	7	5	1	26
From 0.67 gram to 0.84	10	5	5	4	24
From 0.84 gram to 1.00	7	2	3	1	13
From 1.00 gram to 1.25	4		1	1	6
1.25 grams and more	3		1	2	6
Total families	44	22	27	12	105
Per cent of families receiving below 0.67 gram	48	68	63	33	53

TABLE 10

Distribution of families according to the amount of iron received. (15 mgm. per man per day taken as a standard)

MILLIGRAMS OF IRON PER MAN PER DAY	NUMBER OF FAMILIES RECEIVING SPECIFIED NUMBER OF MILLIGRAMS OF IRON PER DAY				
	Italian	Jewish	Negro	Miscellaneous	Total
Less than 10 mgm.	2	3	8	1	14
From 10 mgm. to 15	16	7	9	2	34
From 15 mgm. to 20	13	8	7	6	34
20 mgm. and more	13	4	3	3	23
Total families	44	22	27	12	105
Per cent of families receiving below 15 mgm.	40	45	63	25	46

TABLE 11

Distribution of families according to the amount of phosphorus received (1.32 grams per man per day taken as a standard)

GRAMS OF PHOSPHORUS PER MAN PER DAY	NUMBER OF FAMILIES RECEIVING SPECIFIED NUMBER OF GRAMS OF PHOSPHORUS				
	Italian	Jewish	Negro	Miscellaneous	Total
Less than 1 gram	6	3	8		17
From 1 gram to 1.32	7	6	8	3	24
From 1.32 grams to 2	23	9	9	6	47
2 grams and more	8	4	2	3	17
Total families	44	22	27	12	105
Per cent of families receiving below 1.32 grams	30	40	60	25	39

Among the Hebrews it was found that the three families whose diet was adequate in food value in all respects spent between $0.40 and $0.50 per man per day.

Among the 27 Negro families 11 were paying more than $0.35 for food per man per day, but of these only 4 families were meeting the food requirements in all respects. These paid from $0.43 to $0.68 per man per day.

The miscellaneous group had diets providing practically all of the requirements and spent $0.31 to $0.56 per man per day.

The number of families who spent liberally above the minimum cost per man per day ($0.35) showed the smallest percentage of deficiencies.

From this it might be concluded that, had the amount of money been sufficient, there would have been much less danger of deficiencies in diet.

TABLE 12

Percentage of 84 families with diets deficient in one or more food values, arranged according to nationality

ITEMS OF FOOD VALUE	STANDARDS	PERCENTAGE OF FAMILIES RECEIVING LESS THAN THE STANDARD ALLOWANCE OF FOOD VALUE				
		Italian	Jewish	Negro	Miscellaneous	Total
Calories	3000	50.0	81.0	70.0	50.0	61.8
Protein	75.0 grams	9.0	18.1	37.0	0.0	17.1
Fat	56.0 grams	22.7	50.0	0.0	0.0	20.0
Calcium	0.67 grams	51.7	72.2	59.2	25.0	57.3
Iron	0.015 grams	48.0	50.0	62.9	25.0	51.2
Phosphorus	1.32 grams					
Cost per man per day	$0.35					
Per cent paying less than $0.35 per man per day for food		14.0	50.0	25.0	0.0	42.8

All previous studies whether of American or foreign families have shown a deficiency in mineral content. This study shows an even greater deficiency in the supply of phosphorus and iron than was discovered in a previous study in New York. Sherman and Gillett found in a study of 92 families in New York City in 1917 that 48.9 per cent of the families were receiving less than the standard allowance of 1.44 grams phosphorus per man per day; 53.2 were receiving less than 0.68 gram calcium, and 41.3 per cent less than the 15 milligrams of iron. This study in the winter of 1918 showed the following increased deficiency:

	1918	1917
	per cent	*per cent*
Families receiving less than the standard allowance of phosphorus	61.8	48.9
Families receiving less than the standard allowance of calcium	57.3	53.2
Families receiving less than the standard allowance of iron	51.2	41.3

Doubtless this deficiency in the mineral content was one of the causes for the undersize and lack of vigor noted among the children of the families studied. Among the Italian children there were many cases of rickets, in fact one would seldom see a child between one and eight

years of age who was not extremely bow-legged. The investigators found many homes in which the housewives bought no milk at all because they thought it too expensive and at the same time were buying a small piece of cheese at $1.25 a pound.

In the Italian homes visited by the dietitians of the New York Association for Improving the Condition of the Poor there was found a decided contrast in their liberal use of milk.

This is only one of the many illustrations that could be given of the improvements brought about in the diet by careful, personal instruction by philanthropic organizations. Lectures and group instruction would be of practically no avail in these instances because these women do not attend public gatherings and could not understand what was said if they did. This individual instruction is a continued tedious process because the habits of years have to be overcome; yet the children are the future citizens and it is not right that they should suffer.

In view of the conditions shown by dietary studies and in the improvement shown through instruction in the homes where mothers have not had an opportunity to learn how to adjust themselves to their circumstances, it would seem to be a much wiser plan to spend money for instruction of the mothers rather than to spend it later as charity, doctor's bills, punishment for crime, and education and care for the mentally deficient.

CHICAGO'S EXPERIMENT

NANCY G. GLADISH
Austin High School

In February, 1920, at the beginning of the semester, the Chicago High Schools offered a half year general course in home economics for first-year girls. Ten weeks are used for food study, hygiene, and care of the house, and ten weeks for textiles, study of the family, and house furnishings.

The lessons have been worked out by groups of the teachers, who chose the part of the subject each preferred, and consulting together arranged the material in shape for use.

In many cases the domestic science and domestic art teachers carried parallel classes, exchanging at the end of ten weeks, so that each might keep to her major subject. In some cases, however, the same teacher is carrying the whole course.

At the close of the first ten weeks a questionnaire was sent out, and according to the returns the teachers seem to find the course a success, even though changes will have to be made, and some lessons simplified and shortened. Many of us feel that it is the greatest opportunity that the home economics group have had to reach the girls who have never before been able to take the subject.

The following schedules are still open to change, but indicate the line of work:

Outline of a General Course for High Schools from the Standpoint of the Home

5 single periods per week—20 weeks.

1. The Home. Emphasis on food. *Ten weeks.*

Incomes and budget. Typical incomes of various groups of families represented in Chicago, e.g., instructors; ministers; lawyers; carpenters; street-car men; clerks; unorganized laborers. Division of income, budget. Detailed lessons on amount to be spent for housing, clothing, and food; savings; recreation; banking; accounts.

Food. Food for the family for the day; planning of meals for the day; marketing; special needs of members of the family, e.g., small children, aged, invalids. Preparation of meals. Trays for the sick. Cooking for children.

Care and operation of home. Systematic planning and doing of daily and weekly work in the home; reading of electric and gas meter; heating systems; plumbing; plumbing code. Laws relating to housing.

2. The Home. Emphasis on clothing. *Ten weeks.*

The family in the home. Primitive life; evolution of family, part family life has played in civilization. Relation of family to community.

Clothing. Principles which underlie selection of materials to be used in clothing and household furnishings; testing of fibers; comparison of ready-made and bought garments; remodeling and renovating; care of garments. Making some garments. Care of fabric and laundry work.

Furnishing of the home. Selection of the home. Cost and decoration. Art principles underlying the selection and combination of colors.

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Clothing for Women, Baldt.
Housewifery, Balderston.
Manual to Business Forms, Eaton.
The Family as a Social and Educational Institution, Goodsell
Decoration of the Home, Daniels.
Feeding the Family, Rose.
The Business of the Household, Taber.
Care of the House, Clark.

The following shows how the course might be divided into recitation and laboratory periods. It also shows how easily it could be programmed.

WEEK	RECITATION	RECITATION	LABORATORY	LABORATORY	RECITATION
1	Typical incomes	Food for the family	100 calorie portions	Food preservation—experiments	Cost of foods
2	Division of income	Division of income. Begin budget	Food preservation. Practical	Food tests. Analysis	Complete budget
3	Detail of food in budget	Detail of food in budget. Begin note books	Day's ration in raw food materials. Menu	Prepare breakfast	Discuss breakfast cost—adequate food value?
4	Table service	Planning details of laboratory work	Prepare luncheon	Prepare dinner	Discuss luncheon and dinner cost and adequate diet
5	Planning special diet—children and aged	Plan laboratory work	Prepare tray for child	Prepare tray for elderly person	Note book work
6	Household accounts—Tabulate cost of meal	Banking—saving and checking	Food tests	Food tests	Thrift lesson. Methods of investments
7	Marketing	Invalid diet	Prepare trays	Prepare trays	Weekly work of the home
8	Methods of heating	Lighting. Reading meters	Ventilation and experiments	Care of floors	Plumbing
9	Leavening agent	Meat—experiments	Bread making	Meat	Note book work
		Home recreation	Afternoon refreshments	Evening refreshments	
1	The family. Primitive and patriarchal	Selection of material for a hat	Making of a hat	Making of a hat	The family. Middle Ages. Renaissance
2	Family down to present time including English	Effect of industrial revolution on family. The present situation	Making of a hat	Making of a hat	Cost of hat and comparison with commercial hat
3	Commercial patterns	Discussion of sample	Testing material for selection of goods for garments	Testing material	Physical properties of fabric

WEEK	RECITATION	RECITATION	LABORATORY	LABORATORY	RECITATION
4	Selection of material for garment	Principles underlying home decoration	Making a garment	Making a garment	Floors and floor covering
5	Wall and wall covering	Selection of furniture	Making a garment	Making a garment	Furnish a 4 room flat $500
6	Seasonal care of clothing	Repair of garments	Making a garment	Making a garment	Cost of garment and comparison with commercial garment
7	Complete details of furnishing	Note book	Making a household article	Making a household article	Preparation of clothes for weekly wash
8	Use of reagents in softening water	Soaps and bluings. Starch	Laundry	Laundry	Laundry appliances and care
9	Detail of clothes in budget	The completed budget for family	Laundry	Laundry	General summary and note book

While the course seems crowded and almost impossible of achievement, while it requires careful planning and preparation, the girls enjoy it, perhaps partly because it means high speed work, as youth loves the swing of rapid action.

It gives the pupils a starting point for knowledge of many things relating to home making, and in some cases it has aroused a strong desire to take the fuller home economics courses which will still be offered to upper class students.

Some teachers have linked up the work with the "home project" idea, and that is one of its possibilities, and, indeed, almost a necessity if the amount laid out is covered and made sufficiently the pupil's own so that it may really function in home life.

The consensus of opinion of the home economics teachers seems to be that Chicago's Experiment is "blazing the way" for some very fine, useful, constructive work.

A PROJECT IN HOUSEHOLD ARTS

HELEN MESTON

Note: The project herewith reported originated in a Household Arts Class in a private school in New York City during the term of practice teaching of Miss Helen Meston, a Student of Teachers College, Columbia University, and was carried out by her class under the supervision of Miss Josephine Marshall.

It originated with the children and in the course of its development all phases of the work which the teacher had felt the girls were ready for and should have, arose naturally through the children's own suggestions. This was particularly interesting in as much as in a discussion previous to the origin of the project the children had expressed the opinion that they had had all they needed of costs, food values, and even of cooking processes, as is shown in Miss Meston's report.

"We want to earn some money to buy a moving picture machine for our school, and we'd like to give a luncheon to our mothers and charge them for it!"

This was the eager greeting which the teacher of foods received as she entered the laboratory of the Junior High School. The teacher was no less delighted with the scheme than were the girls, because she saw in it the possibility of working out certain plans which she had for the semester's work in a way that would be most interesting to the girls. The very next remark of the spokesman was evidence that one of the aims would be reached with no difficulty whatever. "It would have to be simple, because we want to make money."

In planning the work in foods for the semester, the teacher had in mind some things which she felt it was quite important for the girls to learn. These girls had done some work in the preparation of foods and it seemed best that they take up their study now from the standpoints of health and economy. In a preliminary discussion lesson, very little interest was aroused in food values or anything in connection with health. The girls said, "We had that last year." Very few of them had ever been confronted with problems of economy, so this had no place in their original plan for serving a luncheon. The outlook for teaching the things that the girls needed, without lessening their interest, had not been very bright.

How different the problem became when they, themselves, felt the need for these things! The class at once plunged into the plans for

the luncheon. After deciding upon the time, the menu was considered. This discussion followed:

Teacher: "What do we have to think about, in planning this menu?"

Edith: "Cost, because we want to make money."

Teacher: "Anything else?"

Mabel: "We want to give the most food value for the least money."

Jean: "Isn't there some way of finding out what is the food value of anything?"

Mabel: "Isn't there something about calories?"

The meaning of the term "calories" was discussed, and the way the calorie is used to measure the energy which our foods give us. Then the need for different kinds of food—especially protein, minerals, and vitamines—was considered. The next question was, "What dishes can we serve that will give these things for the least money?" Macaroni and cheese was decided upon as a satisfactory main dish. Edith told about her mother's recipe for macaroni and tomato with grated cheese on top, so Edith was asked to bring her recipe next time and prepare it.

At the next lesson, one group prepared macaroni and tomato from Edith's recipe and one group macaroni and cheese from another recipe. Two girls worked out the number of calories in each recipe and two worked out the cost. The two dishes were properly served at the table and the vote was in favor of Edith's recipe. The class was asked to complete the menu that day. Many things were suggested, but they finally decided upon "Polly's salad," rolls, cocoa, and lemon jelly with whipped cream.

There were still a number of details which had not been considered, so, at the beginning of the next lesson, the teacher asked the class to choose a committee to whom they were willing to entrust the plans for the luncheon. This committee met with the teacher, and made very definite plans for the menu and the apportionment of the work, while the remainder of the class made "Polly's salad" and cocoa under the direction of the supervisor. The general committee appointed the waitresses, the reception committee, and a committee for the preparation of each article of food, and assigned the duties to each group. The girls on the committee did practically all of the planning and choosing, with only occasional suggestions and criticisms from the teacher.

During the last regular lesson before the luncheon, each group was asked to make out its market order and hand it to the teacher. (These orders, after being checked and revised, were returned to the girls on

their marketing day.) A practice service followed, in which the waitresses could learn their part in the serving that would be needed. Two days before the luncheon, a little extra time was taken for a trip to the market, where the girls did their own purchasing under a teacher's supervision. On the afternoon before the luncheon was served, the girls met without the teacher to prepare their jelly, mayonnaise, and a few other things. Despite the previous warnings of the teacher that the room should be cleared up and the food carefully put away to be kept clean, the room was left in a very bad condition and some of the food exposed to dust over night. When the principal of the school saw the room the next morning, she felt that this was the time to teach the lesson the children needed and that it would be more effective if it should come from the principal instead of from the teacher of foods. Though she hated to cast shadows on the big day, she considered this one of the biggest lessons of the whole project, so she called the children out of their classroom and gave them a lesson in cleaning up, in taking care of food, and most of all in assuming their share of responsibility. It was done in the kindly but forceful way that brings results. Needless to say, the rooms were left in "apple-pie order" after the luncheon.

On the day of the luncheon, each group went to work in a business-like way. Since the dining room was on the floor above the kitchen, there was a teacher in the dining room and one in the kitchen to suggest and help when help was asked for, but the work was done entirely by the girls, and their own ideas were carried out. Despite the fact that the macaroni had not enough salt, the salad plates were a little too full, the whipped cream on the dessert a bit "plastered," and the waitresses a little confused, the luncheon was voted a success and the mothers enjoyed it.

When making the plans, the girls were inclined to buy and make too much of everything. The teacher showed them what a small profit they would have if they did this and suggested ways of cutting down, but they were sure they needed all that they had planned for, so they were allowed to have their own way. They did have a good deal of food left, of which they had to dispose. Some of it was sold for use in the school luncheon, and some was sold to the mothers.

Menus and place-cards had been made in the art class, costs had been calculated in the seventh grade arithmetic class, and application of facts learned about foods were made in the hygiene class. These things, and the fact that the teacher in charge of the lunch room moved

out of her room, and served luncheon to the little children in the Kindergarten room, show the kind of coöperation that exists in the school.

One of the most interesting things was the way in which Mabel took hold of the work. She had never cared for practical work before; though she would always do what was assigned to her, she had never shown any real pleasure in doing it. From the beginning, she was interested in this and the calculation of the number of calories in each dish delighted her. When it was found that there would not be time to calculate calories in the class before the luncheon, she asked if she might do it outside of class. She did this, and after her work was approved by a teacher, she gave a little talk to the mothers about the number of calories that were being offered them.

At the first lesson after the luncheon, the whole class computed the calories in the dishes that were served, from a list of 100-calorie portions of different foods. They reviewed the reasons for computing calories, and found out about how many calories they would need in a day and how many for a single meal. This led, during the next lesson, to a trip to the Museum, where there was a special food exhibit. After this visit the girls asked for more study of food values. They planned to set up an exhibit of 100-calorie portions, and did so at a later period.

In the last lesson of this project, the children were asked to criticise their work from a general standpoint and to tell what they had learned from it individually. They thought the whole project had been worth while. They had learned to work together, and they had learned something about preparation of foods, table service, marketing, and care of the kitchen. Some of their own adverse criticisms were: "We had too much food." "The waitresses were not always paying attention and had to be called to their work." "A few girls tried to do too much and didn't give others a chance." "The macaroni didn't have enough salt." The teacher suggested that everything should be tasted before being served. They all thought they could do better another time.

The supervisor was anxious for them to have a chance to correct the mistakes which they had made, so since the girls had worked out one project of their own, she suggested that they plan and serve a very simple luncheon for themselves, during a regular class period, doing everything as much better than they did it before as possible. The girls were pleased with this plan, and worked out this luncheon on the basis of their own individual needs. The serving of this completed the semester's work.

TRAINING HOME ECONOMICS STUDENTS FOR JOURNALISM[1]

MARIE SELLERS

Household Editor, "Pictorial Review"

It is a great privilege to speak on the topic of training home economics students for journalism because the farther I get into magazine work the more I realize the great need there is for journalistic training for the college student.

Practically all of the leading agricultural colleges have courses in journalism, sometimes called "agricultural journalism" or "industrial journalism." Institutions such as the Universities of California, Colorado, Illinois, Purdue (Indiana), Iowa State College, Kansas, Michigan, Minnesota, Missouri, Nebraska, Cornell (New York), North Dakota, Ohio, Oregon, Pennsylvania State, Washington, Wisconsin, give journalistic training to students in home economics.

Whatever the courses may be named, or whatever they purport to teach, it can be nothing but journalism, regardless of the subject-matter that forms the basis of the actual writing. If one can write acceptable news-items, editorials, or special articles, with their related journalistic forms, it makes little difference whether one specializes on alfalfa or human nutrition.

The best training for a person who wishes to enter the field of writing on home topics, is *a combination of the best in journalism and the best in home economics*. A person lacking in either is severely handicapped, and it is hard to tell which is the worse—a trained home economist who thinks she can write, but can't; or a trained writer who thinks she knows home economics, but doesn't. It is futile to debate the point; first, because it is a matter of opinion; and, second, because both are unspeakably bad.

A successful writer in this field must know the subject on which she writes. It is doubly necessary, because almost all readers have enough knowledge to enable them to detect some errors of facts.

At Cornell the journalistic courses insist first on a ground work in the principles of English composition. No one can enter the journalism

[1] Brief summary of a paper presented at the Thirteenth Annual Meeting of the American Home Economics Association, Colorado Springs, June, 1920.

courses who has not satisfied that requirement. This practice is the usual one at other institutions, and I feel that it cannot be considered too seriously, for a training in *good* English expression as well as composition is very much needed today. There are many students in our educational institutions, and especially in the agricultural colleges, who have not had in their youth the opportunity to hear perfect English spoken. In many cases these students' parents have moved out into the rural districts before schools were available and there have been, in many cases, few opportunities when advantage could be taken of good training in English. Some of the women students in agricultural colleges which I have visited have spoken to me of this and have expressed their desire to have better training in the use of correct English. No field offers more opportunities for the use of journalistic training than that of extension work. The extension worker must be versatile not only in many phases of home economics but she must be ready at a moment's notice to give a speech or write an article or prepare some news item or editorial for the local papers.

I hope the time has come when a course in journalism will be required for each home economics student, or at least that course advisers will be instructed to urge their students to elect some study in journalism.

As for the use of journalistic training in research work, editorial work, and magazine writing, there is a real need and a demand for combined training in home economics and journalism for a limited number of persons. Those qualified by training and aptitude will have no difficulties, other than those inherent in hard work, unflagging energy, and constant study, in achieving a high success.

EDITORIAL

Annual Meeting of the American Home Economics Association. The thirteenth annual meeting of the American Home Economics Association was held at the Hotel Antlers, Colorado Springs, Colo., June 24 to 29, 1920. There were about 300 in attendance. The arrangements had been made by Inga M. K. Allison, Chairman of the Committee on Time and Place, and every convenience and comfort possible to the members of the Association had been provided.

The first Council meeting was held Wednesday evening, June 23, at 8.00, and the regular sessions of the Association began at 2.00 p.m. on Thursday, June 24. The program committee, with Abby Marlatt as chairman, had planned for two general meetings daily, thus leaving some time each day for those in attendance to avail themselves of the opportunities for trips 'round about the Springs.

At the first meeting of the Association, held in the Ball Room of the Hotel Antlers, Mayor Thomas, of Colorado Springs, extended the greetings of the city to the Association, and Dean Corbett of the Colorado Agricultural College, Fort Collins, brought the welcome of the state. The president of the Association, Edna N. White, responded to these greetings, and struck the keynote for the meetings to follow, showing their breadth of interest. She indicated the relation of the A. H. E. A. to child welfare, social service, legislation as affecting the home and women in industry, and the field of education in general.

Miss White emphasized the importance of surveys in the development of the work in home economics.

Two addresses of strong, general interest were presented at this session—one by Mrs. Rufus Dawes, of the Community Kitchen, Evanston, Ill., who spoke on the development of community kitchens, and the other by Olive Davis, of the Government Hotels for Women, Washington, D. C., who spoke on the problems concerned with the organization and administration of these hotels.

In the evening, in the Sun Parlor of the Hotel Antlers, the Institution Economics Section held its meeting and the Extension Education Section met in the Ball Room. Strong programs had been arranged and both meetings were well attended.

The meeting on Friday morning was in general charge of the Extension Education Section. Preceding this program, Cleo Murtland, Chairman of the Committee on Education of Girls and Women for Industrial Occupations, of the National Society for Vocational Education presented a report. The American Home Economics Association took the following action in relation to the report:

I. *Resolved*, That the A. H. E. A. go on record as approving the statement as made in the introduction of the report as presented; and be it further resolved that the A. H. E. A. go on record as favoring a just division of federal appropriations for trade and industrial education in order that the interests of girls and women in industry may be properly considered and their education may be more adequately supported.

II. Voted that the A. H. E. A. appoint a committee to coöperate with a committee representing trade and industrial education of women from the N. S. V. E., said committee to present a preliminary joint report at the February meetings of the A. H. E. A. and the N. S. V. E., and also at the annual meeting of the A. H. E. A. in June, 1921.

III. *Resolved*, That it is the consensus of opinion of the A. H. E. A. that in the vocational education of women in industry the educational value of extramural training in the shops, factories, and offices is of equal rank with that given within the four walls of the school building, and that it should be organized and supervised.

The survey of the work of the extension field was well presented by Florence Ward of the Office of Extension Work, North and West, and by Ola Powell, Office of Extension Work, South. Papers were presented by Miriam Haynes, State Leader, Colorado, and Nina Crigler, Food Specialist, University of Illinois.

On Friday afternoon two round tables were conducted—one of Red Cross workers, and one of public school teachers with Jenny H. Snow, Supervisor of Household Arts, Chicago Public Schools, as chairman.

At 8.00 p.m. a general session was held, with Abby Marlatt as chairman. Dr. Caroline Hedger, Medical Director of the Elizabeth McCormick Memorial Fund, Chicago, told of the work of that organization in combating malnutrition. She was followed by Marie Sellers of the *Pictorial Review*, New York City, who spoke on Training Home Economics Students for Journalism, and Harlan Smith, of the U. S. Department of Agriculture, who told of the publicity work of the Department of Agriculture in relation to home economics.

At the Saturday morning meeting Dr. Langworthy spoke of the work in nutrition of the National Research Council. The meeting from this

point on was in charge of the Textile Section, Mabel B. Trilling, presiding. Grace Denny, Ethel Phelps, and Paul I. Cherington, Secretary of the National Association of Wool Manufacturers, spoke on various phases of the textile question. Miriam Birdseye presented a report of the excellent constructive work which has been done, by the committee of which she is chairman, on establishing minimum standards for textile fabrics.

At the evening meeting the Textile Section, with Mabel Trilling as chairman, and the Science Section, with Dr. Helen B. Thompson as chairman, held meetings. Both meetings were well attended and excellent papers were offered.

Other papers were presented on Monday and Tuesday, June 28 and 29. Hugh Magill of the National Education Association spoke on The Nation and Education. Dr. Agnes Fay Morgan and Dr. Helen B. Thompson spoke on scientific phases of home economics.

At 2.00 p.m., Monday, June 28, the Science Section held a second meeting with Dr. Helen B. Thompson presiding. On Tuesday afternoon a round table was held on Education in Homemaking, with Adelaide Baylor of the Federal Board for Vocational Education presiding.

Four Council Meetings and two general business meetings were held with excellent attendance.

The officers elected by the Association for the ensuing year are as follows: President, Mary E. Sweeney; Vice-presidents, Edna N. White and Isabel Ely Lord; Council Members (terms to expire, 1925), Inga M. K. Allison, Isabel Bevier, Mary Kelso, Abby Marlatt, Helen B. Thompson. The Council appointed Lenna F. Cooper as secretary and Mr. H. G. Turpin as treasurer. A more detailed statement of the Council meetings and the business meetings of the Association will appear in the Association Bulletin.

Due to the fact that the Secretary was teaching in the summer session in the University of Colorado, and had been graciously released for part of the time of the meetings, Lenna F. Cooper, the newly elected secretary, acted as secretary pro tem during the Council meetings and business meetings on Monday and Tuesday, June 28 and 29.

Very efficient work was done by the Pen and Press Committee, with Ava B. Milam in charge, in providing reports of meetings to local and other daily papers, and reports of the convention to periodicals. This service was much appreciated.

CORA M. WINCHELL,
Secretary.

The Conference on Group Living. The Editor of the JOURNAL was particularly favored in being able to attend the Conference on Group-Living held at the Lake Placid Club, Lake Placid, N. Y., May 27 to 31. Some 80 people gathered there, representing among others the American Home Economics Association, the American Dietetic Association and the Young Women's Christian Association. The presence of several deans of women and members of the faculty in institutions where institution administration courses are taught added to the educational value of the conference. The one thing that marred the conference was Mrs. Dewey's illness. She was able to be present only at the first meeting when she gave her cordial welcome to the conference and made suggestions of great value. The program was an unusually broad one, including practical aspects of the work, the theoretical side on which these practical applications were based, business methods and research. Community kitchens, cafeteria service, the work of the social service dietitian, aspects of coöperative buying, opportunities for training in technical fields, diet studies, research work illustrated by a study of the apartment hotel, an account of work actually accomplished, such as the experiment in democracy in running government hotels—each of these received attention.

Opportunities were given for inspecting the kitchens at Lake Placid, and, as always, walks, boating, and motor trips added to the pleasure of the guests.

The informal conferences were especially valuable, as many points were brought out in these that were not touched upon in the more formal speeches. Several of the papers will appear in the JOURNAL, some in the *Modern Hospital* and in other publications, while a general summary of the conference will also be printed.

Diabetes and the War. It is a relief after reading and thinking of the nutritional calamities of the War, to learn of nutritional gains. One such is the decrease in diabetes of which many reports are coming in. Magnus-Levy in a recently received number of a German periodical[1] gives figures for the civilian population of Berlin. From 1900 to 1914 deaths from diabetes had increased from 245 to 444, but by 1918 they had fallen off to 202. "The development of diabetes is particularly favored by luxurious nutrition."[2]

[1] *Deutsche Medizinische Wochenschrift*, 45 (1919), p. 1379.
[2] *Chem. Abs.*, April 20, 1920.

BOOKS AND LITERATURE

Bobbins of Belgium. By CHARLOTTE KELLOGG. New York: Funk and Wagnalls Company, 1920, pp. 314. $2.00.

"In Flanders fields the poppies blow" we have heard many times since MacRae wrote his exquisite little poem, but far less have we heard of the so-called "flower of Belgium" that continued to grow and blossom on the lace cushions of the Flemish women despite the vicissitudes of war. Many American women have an appreciation for "real" lace and cherish a few pieces perhaps handed down from mother to daughter, but few there are who have any knowledge of the technique of such lace and the conditions under which it is made. Mrs. Vernon Kellogg in her book, entitled *Bobbins of Belgium*, describing a series of "little journeys" to the lace districts, gives in informal and non-technical language much interesting information about the lace industry which has flourished in Belgium since the Renaissance.

Strangely enough the Great War has in many ways benefited this industry in Belgium. Through the efforts of the Brussels Lace Committee, a group of prominent and devoted Belgian women, the work was kept going during the war, fine old designs and types were revived, better wages were obtained for the workers, and, what is perhaps even more important for the art, normal schools are being developed in which workers are trained as teachers.

Bobbins of Belgium may also be considered a plea to patrons of the arts to encourage the making of the more difficult and delicate kinds of lace suitable in reality only to be placed in collections. The more skilled workers are passing, but new ones will take their places if the wages are made adequate.

The book contains many and excellent illustrations of the various kinds of lace made in Belgium and of some pieces of historical interest, such as the scarf presented to Queen Wilhemina of Holland in gratitude for the help given to Belgians within Dutch borders during the war, and the magnificent banquet cloth presented to Queen Elizabeth on her return from exile.

An appendix, with illustrations, by the Directrice of the Brussels School of Design gives the fundamentals of construction of the two main types of laces, those made with the needle and those made with bobbins.

RUTH VAN DEMAN.

Care and Feeding of Infants and Children. (A Text Book for Trained Nurses.) By WALTER REEVE RAMSEY, M.D. Philadelphia: J. B. Lippincott Co., 1916, pp. 290. $2.00.

Infancy and Childhood. (A Popular Book on the Care of Children.) By WALTER REEVE RAMSEY, M.D. New York: E. P. Dutton & Co., 1916, pp. 198. $1.25.

The worth of a book on child care is measured largely by its simplicity and adaptability to the every day needs of mothers and nurses. Dr. Ramsey in his two volumes has made it possible for mothers and nurses to obtain essential information regarding the care of children without going into the intricacies of percentage feeding or infant anatomy. A lot of scientific material has been boiled down by Dr. Ramsey and presented without fads or fancies. Especial attention is given to breast feeding and the methods of encouraging it. He asserts that "90 per cent of mothers can nurse their babies in whole or in part for the first few months and many can nurse them wholly or in part for the first year."

His little book on *Infancy and Childhood*, written in a popular style, is commended to mothers who desire definite and concrete information regarding the up-bringing of their babies. This book has stood the test of four years and is still called for in increasing numbers. A little revision in certain parts would bring it more fully up to date, but even as it stands it is still a valuable manual for the mother.

The nursing manual on the "Care and Feeding of Infants and Children" is presented as a text book for trained nurses. It goes more into detail in the various phases of child hygiene and is profusely illustrated. Dr. Ramsey recognizes the need of nurses to be informed as to the development and progress of child welfare work.

Dr. Ramsey in his first chapter points out clearly the necessary information for nurses relating to the development and progress of child welfare work. In this manual Dr. Ramsey, appreciating the need of nurses for a knowledge of fundamental principles of artificial feeding, has given more space to this subject although he is just as insistent upon breast feeding as in his book for mothers.

The worth of this book as a manual for nurses is attested by the fact that it was introduced as the text book for nurses supervising the training of Health Visitors in France, under the direction of the Children's Bureau.

RICHARD A. BOLT, M.D.,
General Director, Amer. Child Hygiene Assn.

Food Inspection and Analysis. By A. E. LEACH AND A. L. WINTON. New York: John Wiley & Sons, Inc., 1920, 4 ed., pp. xix + 1090, pls. 42, figs. 128. $8.50.

This manual, designed for the use of analysts, health officers, chemists, and food economists, has been revised and enlarged to the extent of 90 pages; new material having been added or substituted for material in earlier editions. The former arrangement of chapters has been retained but the list of references at the end of chapters has been left out and, instead, more attention has been given to footnote references. As is stated in the preface, wherever possible the original papers referred to have been consulted and where this could not be done reliance has been placed in abstracts which appeared in "Chemical Abstracts" or in the "Experiment Station Record." A special feature is the final chapter by G. L. Wendt, "Determination of Acidity by Means of the Hydrogen Electrode," a method which, as pointed out, seems destined to play an important part in food analyses.

The book includes such subjects as food, its functions, proximate components, and nutritive value; general methods of food analysis including microscope and refractometer; milk and milk products; flesh foods; eggs; cereal grains; tea, coffee, and cocoa; edible oils and fats; sugar; as well as artificial food colors, food preservatives, artificial sweeteners, flavoring extracts, and substitutes.

Not only is the volume valuable for the analytical methods described but also for the large amount of information regarding properties and uses of foodstuffs and condiments, which it provides in convenient form.

Meats, Poultry and Game; How to Buy, Cook and Carve. BY EDOUARD PANCHARD. New York: E. P. Dutton and Company, 1919, pp. 134. $3.00.

This book merits its sub-title "How to Buy, Cook and Carve" as it is full of many old, new and helpful suggestions under each heading. These are supplemented by unusually fine illustrations which bring out the desired points.

Part I is written very definitely and clearly but Part II, "A Potpourri of Recipes," would be rather difficult for an inexperienced cook to follow.

MARION EVANS DAKIN,
Pratt Institute.

BOOKS RECEIVED

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Experimental Organic Chemistry. Augustus P. West, University of the Philippines. Yonkers, N. Y.: World Book Co., 1920, pp. 469. $3.00.

Food Facts for the Homemaker. Lucile Stimson Harvey. Boston and New York: Houghton Mifflin Co., 1920, pp. 314. $2.50.

Household Arithmetic. Katherine F. Ball and Miriam E. West. Philadelphia. J. B. Lippincott Co., 1920. $1.48.

Household Arts for Home and School. Anna M. Cooley. New York: The Macmillan Co., Volume 1, 1920, pp. 221.

The Nation's Food. Raymond Pearl. Philadelphia: W. B. Saunders Co., 1920, pp. 274. $3.50.

Transactions of the Tenth Annual Meeting. American Child Hygiene Association, 1211 Cathedral St., Baltimore, Md. $3.00.

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MISCELLANEOUS

The Origins of Civilization. J. H. Breasted, *Sci. Mo.*, 9 (1919), Nos. 4, pp. 289–316, figs. 23; 5, pp. 416–422, figs. 17; 6, pp. 561–577, figs. 19; 10 (1920), No. 1, pp. 87–105, figs. 18; 2, pp. 183–209, figs. 32; 3, pp. 249–268, figs. 18. In these William Ellery Hale lectures before the National Academy of Sciences in Washington, the author discusses the origin of civilization in the Nile valley in the old stone age and traces its development and spread through Asia Minor to Europe. To the Egyptians is ascribed the domestication of cereal grains (such as wheat and emmer), of flax, and of cattle, sheep, and other animals. The development of architecture is considered, and mention is made of clothing, agriculture, commerce, and many other matters. Although not prepared for students of home economics, this clear and well presented summary contains much information of interest to them.

Wages and Hours of Domestic Servants in England and Bavaria. *U. S. Dept. Labor, Bur. Labor Statis., Mo. Labor Rev.*, 10 (1920), No. 2, pp. 130–132.

Electrical Efficiency in the Home. B. Grey, *New West Mag.*, 11 (1920), No. 5–6, pp. 88–91, figs. 5.—Possibilities of equipment for different rooms of a house are discussed and a considerable amount of information given.

Domestic Science as an Opportunity for Sex Education. Lo Ree Cave, *Kansas State Board Health Bul.*, 16 (1920), No. 4, pp. 67–72. This paper was read at the Kansas Conference of Education, Washburn College, Topeka, May, 1920.

The New Visiting Housekeeper: Her Training and Her Work. Emma A. Winslow, *The Family*, May, 1920.

A Hampton Girl's Training. Carrie Alberta Lyford, *The Southern Workman*, May, 1920.

Child Welfare. *The Indian Journal of Sociology* (Baroda, India), Jan., 1920.

Posture Clinics Established by a School Nurse. Idabel Durgan, *The Commonhealth*, Mar.–Apr., 1920.

How Cooking Affects the Digestibility of Foods. Alzira Sandwall, *The Commonhealth*, Mar.–Apr., 1920.

Japanese Toys. M. Kimura, *Japan Mag.*, 10 (1920), No. 9, pp. 363–365, fig. 1. Information is given regarding the kinds of toys produced in Japan for domestic and foreign trade, as well as data concerning kinds of toys required for different markets.

A New Fibre. K. Hoshino, *Japan Mag.*, 10 (1920), No. 9, pp. 345–347. A new fibre plant (*phyllospadix scouleri*), one of the marine algae of Japan, has been found promising as a source of fibre for paper making and for spinning mixed with cotton.

Series of Photographs from the first Exhibition of American Textiles, Costumes, and Mechanical Processes. *Nat. History*, 19 (1919), No. 6, pp. 631–654. The exhibit was held at the American Museum of Natural History, New York, Nov. 12 to Dec. 1, 1919. The legends accompanying the pictures were prepared by Herbert J. Spinden.

Creating a National Art. Herbert J. Spinden, *Nat. History*, 19 (1919), No. 6, pp. 623–630. In a postscript to the article data are given regarding the American Museum of Natural History (New York) Exhibition of Industrial Arts in Textiles and Costumes.

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The Microscopical Identification of Commercial Fur Hairs. L. A. Hausman, *Sci. Mo.*, 10 (1920), No. 1, pp. 70. The relative durability of different furs, the nature of the hair, and its identification by microscopical methods are discussed, and much general information regarding furs and their nomenclature and use is given.

The Glass Industry in America. A. Douglas Nash, *Gen. Fed. Mag.*, Feb.–Mar., 1920.

How the Chinese Make Their Beautiful Enamel Work. Sidney J. Hall, *Sci. Amer.*, cxxii, No. 10, March 6, 1920. This note on Cloisonné Enamel is brief and popular.

Ceramics

Journal of the American Ceramic Society, 1 (1918):

Ground Coat Enamels for Cast Iron, H. F. Staley, No. 2, pp. 99–112.—Comparative studies of different enamels. Paper is followed by discussion.

Alabaster Glass: History and Composition, A. Silverman, No. 4, pp. 247, 261 (figs. 1).—Bibliography is appended.

The Action of Acetic Acid Solutions of different Strengths on a Sheet Steel Enamel, L. J. Frost, No. 6, pp. 422–428 (fig. 1).—In this paper, of interest in connection with enamelware for cooking purposes, results of some tests are reported. According to the author's experiments, a 4 to 5 per cent solution by volume of "such an acetic acid as would probably be used for testing at most cooking utensil plants is well up in strength as regards its action on the enamel surface. This per cent acid is also of about the same strength as the strongest vinegar, which is probably the most destructive agent to which an enameled cooking utensil is subjected in ordinary use." In the discussion following this paper the statement is made that "tartaric acid from cooking grapes, as in making grape marmalade, has a much more severe action on enamels than acetic acid."

Preparation and Application of Enamels for Cast Iron, H. F. Staley, No. 8, pp. 534–555 (figs. 4).—Discussion of methods followed in enameling bath tubs.

Some Types of Porcelain, F. H. Eiddle and W. W. McDanel, No. 9.—606–627 (figs. 13).

The Control of the Luster of Enamels, H. F. Staley, No. 9, pp. 640–647.

Note on Certain Characteristics of Porcelain, A. V. Bleininger, No. 10, pp. 697–702 (fig. 1). Formulae given for enamels such as are used for making enamelware goods.